

Remarks

Claims 1-12 are pending herein. By this Amendment, claims 1-8 have been amended and new claims 9-12 have been added. In addition, an "Abstract of the Disclosure" has been added.

Claims 1-8 have been amended in part to better conform to U.S. practice. Claim 1 has been further amended to positively recite the presence of units derived from polymerization of at least one monomer C. New claims 9-12 have been added to recite the specific monomers previously recited in claims 2, 4 and 6, respectively.

In the Office Action, claims 6-8 are objected to; claims 2-5 are rejected under 35 U.S.C. §112, second paragraph; claims 3 and 5 are rejected under 35 U.S.C. §112, second paragraph; claims 1, 2, 4 and 5 are rejected under 35 U.S.C. §102(b) as being anticipated by GB 1,260,515 (GB '515); and claims 1-4 are rejected under §102(b) as being anticipated by U.S. Patent No. 4,923,941 to Bailey (Bailey). In addition, the Office Action notes that the instant specification lacks an Abstract.

In view of the amendments and remarks herein, Applicants respectfully request reconsideration and withdrawal of the objection and rejections set forth in the Office Action.

I. Preliminary Matters

The Office Action notes that the instant application is lacking an Abstract of the Disclosure. By this Amendment, an Abstract of the Disclosure has been added to the application.

II. Objection to Claims 6-8

Claims 6-8 are objected to as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim.

By this Amendment, claims 6-8 have been amended to remove the multiple dependencies set forth therein.

Applicants respectfully request withdrawal of the objection.

III. Rejection of Claims 2-5 under 35 U.S.C. § 112

Claims 2-5 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

According to the Office Action, the phrase “such as” in claims 2 and 4 renders the claims vague and indefinite.

By this Amendment, claims 2 and 4 have been amended to delete the phrase “such as”. The recitations following the “such as” phrases have been placed in new claims 9, 10 and 11.

Therefore, in view of this amendment to claims 2 and 4, Applicants request withdrawal of this rejection.

IV. Rejection of Claims 3 and 5 under 35 U.S.C. §112

Claims 3 and 5 are rejected under 35 U.S.C. §112, second paragraph, for being dependent upon a claim with the §112 rejection set forth in section III above.

Applicants respectfully request the withdrawal of this rejection in view of the amendments made to claims 2 and 4 to overcome the above-mentioned §112 rejection.

V. Rejection under 35 U.S.C. §102(b)

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. §102(b) as being anticipated by GB '515.

GB '515 is cited for disclosing a detergent composition comprising 0.25-5% by weight of a maleic anhydride-conjugated diene copolymer and 95-99.75% by weight of a detergent. The reference is further cited for teaching that the conjugated diene is either butadiene or isoprene, per the requirements of instant claims 4 and 5. The Office Action refers to page 2, lines 43-65, of GB '515 for the disclosure of a copolymer containing 15 grams of maleic anhydride and 7.7 grams of butadiene, per the requirements of instant claims 1, 2 and 4.

Applicants respectfully submit that GB '515 does not anticipate claims 1, 2, 4 and 5.

As noted above, claim 1 has been amended to positively recite the presence of units derived from polymerization of at least one monomer C. Monomer C is a monomer which is copolymerizable with A and B, but is different from A and B.

GB '515 does not teach the presence of units derived from a third monomer, particularly a monomer which is copolymerizable with the maleic anhydride and conjugated diene monomers therein but which is different from these monomers. Therefore, for at least this reason, Applicants submit that GB '515 does not anticipate claims 1, 2, 4 and 5.

VI. Rejection under 35 U.S.C. §102(b)

Claims 1-4 are rejected under 35 U.S.C. §102(b) as being anticipated by Bailey.

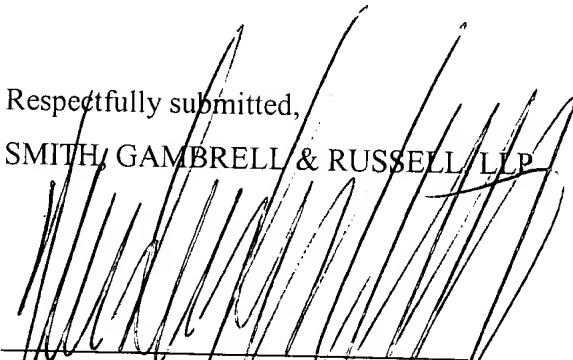
Bailey is cited for disclosing a carboxy-functional polymer for use in a detergent composition, wherein the carboxy-functional polymer is derived from sodium acrylate and 2-methylene-1,3-dioxepane (see col. 10, lines 42-44). The Office Action refers to column 9, Example 1, of Bailey, which discloses a carboxy-functional polymer made from 4.7 grams of sodium acrylate and 1.14 grams of 2-methylene-1,3-dioxepane, per the requirements of instant claims 1-4.

Bailey does not teach the presence of units derived from a third monomer, particularly a monomer which is copolymerizable with the sodium acrylate and methylene-1,3-dioxepane monomers therein but which is different from these monomers. Therefore, for at least this reason, Applicants submit that Bailey does not anticipate claims 1-4.

VII. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request that the objection and rejections set forth in the Office Action be withdrawn and that claims 1-12 be allowed.

Respectfully submitted,
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Listing of Claims

Claim 1 (currently amended): A hydrophilic polymer with improved biodegradability, ~~characterized in that it contains~~ comprising:

- from 70% to 99% by weight of units derived by polymerization from at least one monomer A bearing a carboxylic acid function or an equivalent function,
- from 1% to 30% by weight of units derived by polymerization from at least one monomer B bearing an electron-rich group or a function capable of introducing an electron-rich group into the main chain, and
- ~~from 0% to 29% by weight of~~ units derived by polymerization from at least one monomer C which is copolymerizable with A and B, but is different from A and B, the amount of such units being up to 29% by weight.

Claim 2 (currently amended): The hydrophilic polymer as claimed in claim 1, ~~characterized in that~~ wherein the monomer A is chosen from the group consisting of monomers bearing at least one carboxylic acid and derivatives thereof, ~~such as maleic anhydride, acrylic acid, methacrylic acid, itaconic acid, fumaric acid and maleic acid, and the salts thereof.~~

Claim 3 (currently amended): The hydrophilic polymer as claimed in claim 2 9, ~~characterized in that~~ wherein the monomer A is acrylic acid.

Claim 4 (currently amended): The hydrophilic monomer as claimed in ~~claims 1 to 3~~ claim 1, ~~characterized in that~~ wherein the monomer B is chosen from the group consisting of:

monomers bearing two conjugated double bonds, ~~such as butadiene, isoprene, chloroprene, dimethylbutadiene, cyclohexadiene, butadienecarboxylic acid and butadienedicarboxylic acid, and~~

monomers bearing a triple bond, ~~such as acetylene, acetylenecarboxylic acid and acetylenedicarboxylic acid.~~

Claim 5 (currently amended): The hydrophilic polymer as claimed in claim 4 10, ~~characterized in that~~ wherein the monomer B is isoprene.

Claim 6 (currently amended): The hydrophilic polymer as claimed in ~~one of~~ ~~claims 1 to 5, characterized in that~~ claim 1, wherein the monomer C is chosen from the group containing monomers that are copolymerizable with A and B, ~~such as vinyl, acrylic and styrene monomers and derivatives thereof, but which are different from A and B.~~

Claim 7 (currently amended): A use of a hydrophilic polymer as claimed in ~~one of~~ ~~claims 1 to 6~~ claim 1 in detergent compositions.

Claim 8 (currently amended): The hydrophilic polymer as claimed in ~~any one of~~ ~~claims 1 to 6, characterized in that it~~ claim 1, wherein the hydrophilic polymer is crosslinked with a difunctional agent to form a carboxylic polymer which can be used as a superabsorbent.

Claim 9 (new): The hydrophilic polymer as claimed in claim 2, wherein monomer A is selected from the group consisting of maleic anhydride, acrylic acid, methacrylic acid, itaconic acid, fumaric acid and maleic acid and the salts of the foregoing.

Claim 10 (new): The hydrophilic polymer as claimed in claim 4, wherein the monomers bearing two conjugated double bonds are selected from the group consisting of butadiene, isoprene, chloroprene, dimethylbutadiene, cyclohexadiene, butadienecarboxylic acid and butadienedicarboxylic acid.

Claim 11 (new): The hydrophilic polymer as claimed in claim 4, wherein the monomers bearing a triple bond are selected from the group consisting of acetylene, acetylenecarboxylic acid and acetylenedicarboxylic acid.

Claim 12 (new): The hydrophilic polymer as claimed in claim 6, wherein the monomer C is selected from the group consisting of vinyl, acrylic and styrene monomers and derivatives thereof.